

Name: _____

Date: _____

Period: _____

Unit 7 Practice Test

e
Find the slope given the following information.

 $(-2, 1) (6, 7)$

$$\frac{7-1}{6-(-2)} = \frac{6}{8} = \boxed{\frac{3}{4}}$$

 $(-1, 4) (3, -2)$

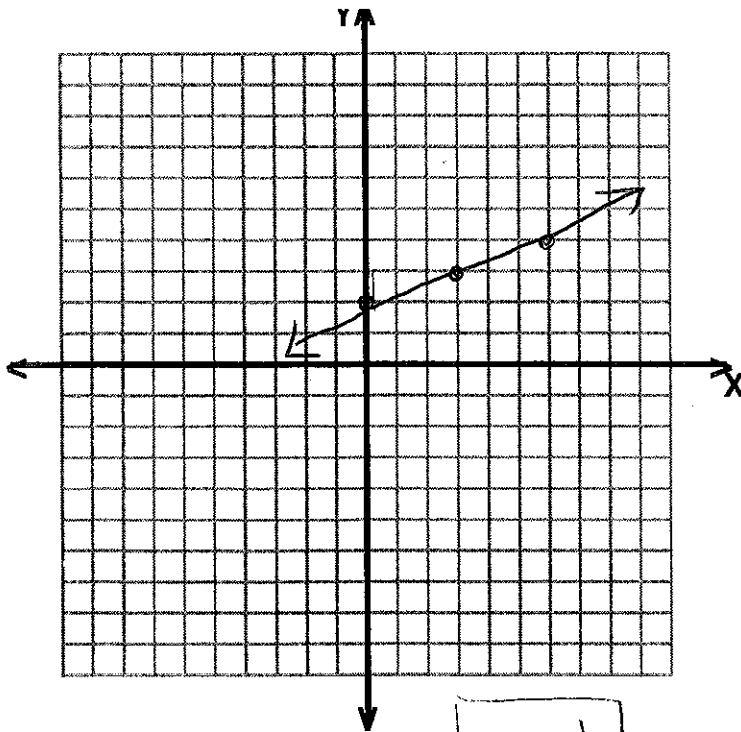
$$\frac{-2-4}{3-(-1)} = \frac{-6}{4} = \boxed{-\frac{3}{2}}$$

x	y
3	10
4	15
5	20
6	25

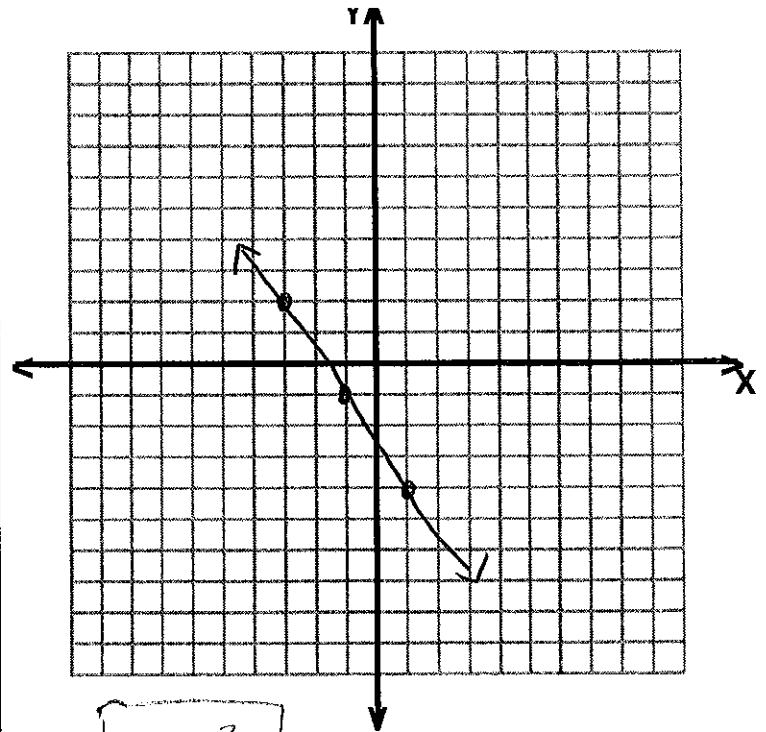
$$\boxed{m=5}$$

x	y
3	6
2	4
1	2
0	0

$$\frac{-2}{-1} = \boxed{2}$$



$$\boxed{m = \frac{1}{3}}$$



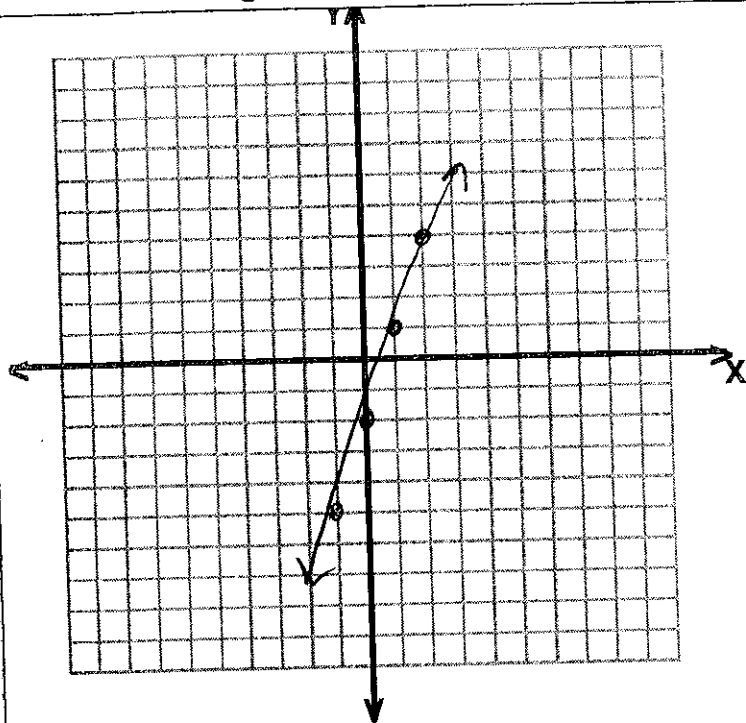
$$\boxed{m = -\frac{3}{2}}$$

Slope-Intercept Form

Write an equation for each in slope-intercept form. Then, graph your equation.

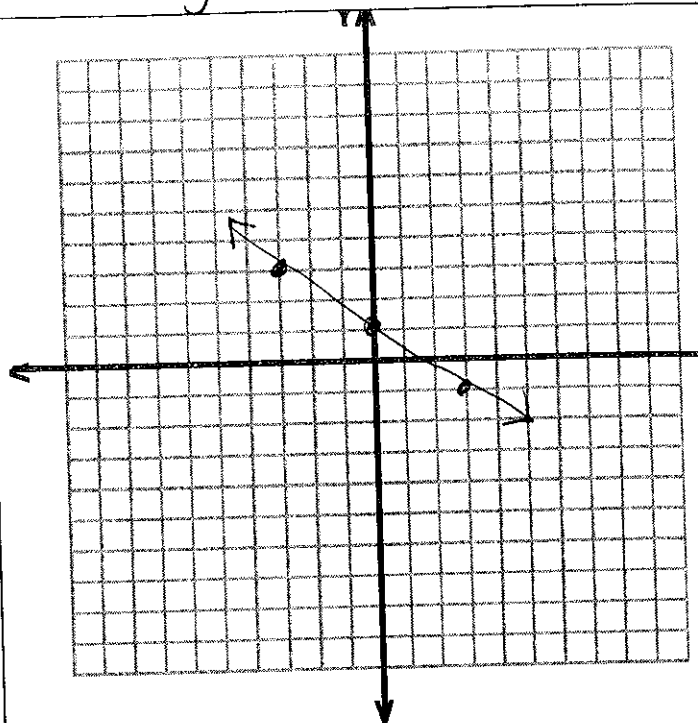
$$m = 3, b = -2$$

$$y = 3x - 2$$

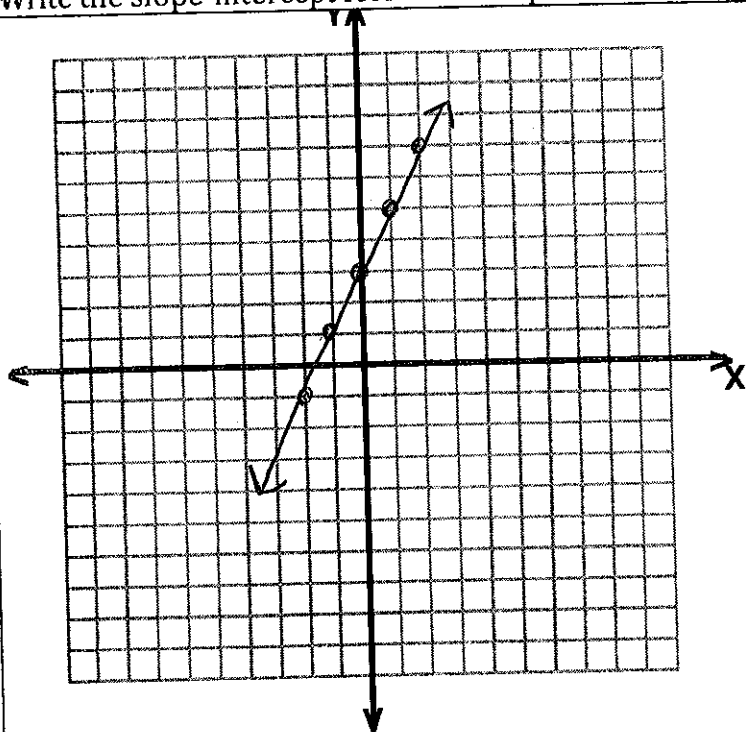


$$m = -(2/3), b = 1$$

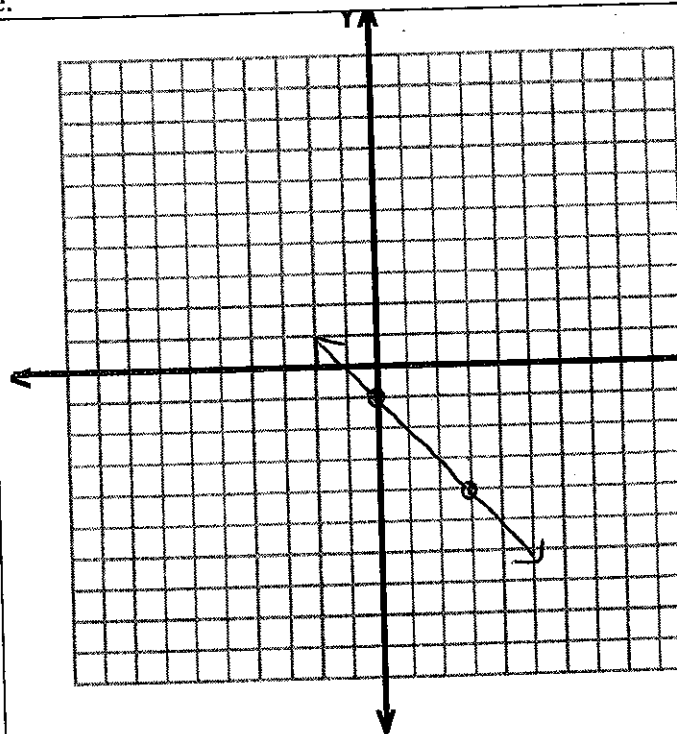
$$y = -\frac{2}{3}x + 1$$



Write the slope-intercept form of the equation for the line.



$$y = 2x + 3$$



$$y = -x - 1$$

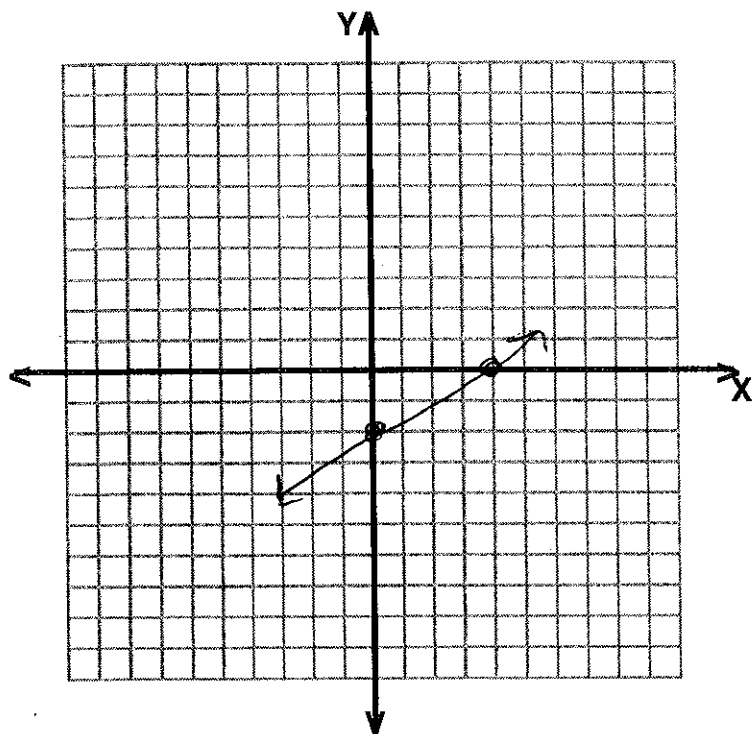
Standard Form

Find the x- and y-intercepts. Then graph each equation using the intercepts.

$$2x - 4y = 8$$

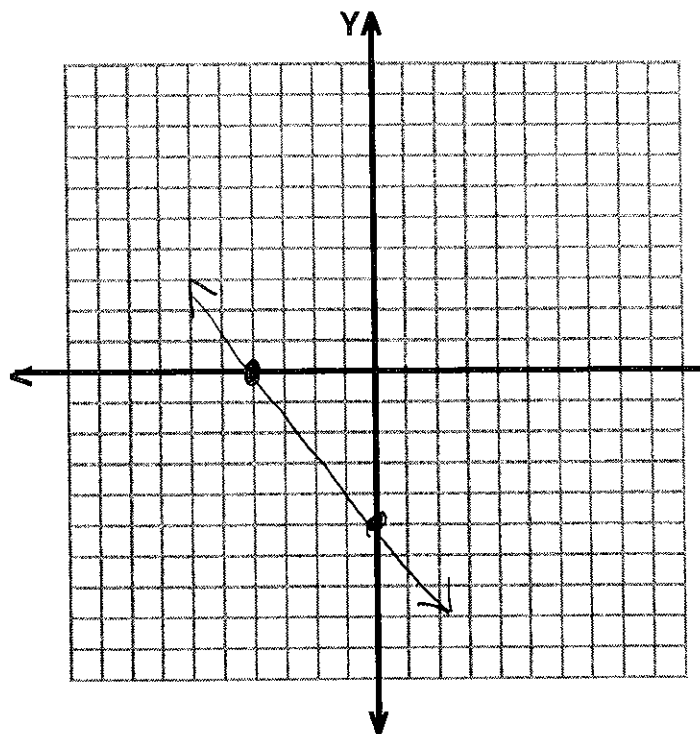
$$\begin{aligned} -4y &= 8 \\ 2x &= 8 \end{aligned}$$

x-intercept: 4 y-intercept: -2



$$4y + 5x = -20$$

x-intercept: -4 y-intercept: -5



Write each equation in standard form using only integers.

$$y = 3x - 4$$

$$-3x + y = -4$$

$$\boxed{3x - y = 4}$$

$$y = \frac{2}{5}x - 10$$

$$5y = 2x - 50$$

$$-2x + 5y = -50$$

$$\boxed{2x - 5y = 50}$$

Parallel and Perpendicular Lines

Identify which lines are parallel.

a. $y = \frac{5}{3}x$

b. $y = -3x + 2$

c. $y = 3x + 4$

d. $y = -3x - 1$

Identify which lines are perpendicular.

a. $y = -2x + 1$

b. $y = -x$

c. $y = x - 2$

d. $y = -\frac{1}{2}x$

Write an equation in slope-intercept form for the line that passes through $(1, 7)$ and is parallel to the line described by $y = 3x + 5$.

$$y = 3x + 5$$

$$y = 3x + b$$

$$7 = 3(1) + b$$

$$7 = 3 + b$$

$$-3 \quad -3$$

$$\hline 4 = b$$

$$y = 3x + 4$$

Write an equation in slope-intercept form for the line that passes through $(1, -4)$ and is perpendicular to the line described by $y = 3x - 2$.

$$y = 3x - 2$$

$$y = -\frac{1}{3}x + b$$

$$-4 = -\frac{1}{3}(1) + b$$

$$-4 = -\frac{1}{3} + b$$

$$-3\frac{2}{3} = b$$

$$y = -\frac{1}{3}x - 3\frac{2}{3}$$

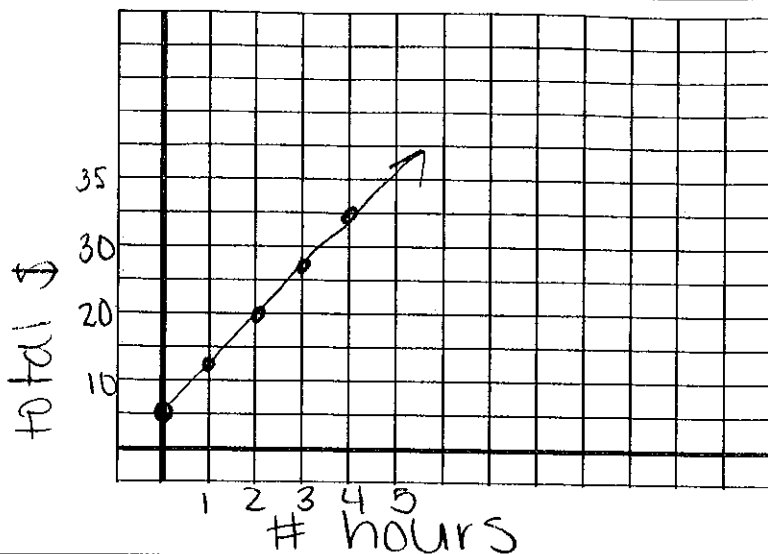
Word Problems

Situation: You decide that you are going to start babysitting this summer. You are going to charge families an initial charge of \$5. Then, you will charge \$8 per hour that they leave their child with you. Write a linear function to describe the situation. Then graph your function.

Let $X =$ # hours Let $y =$ total money

Equation:

$$y = 8x + 5$$



Situation: Each notebook in a store costs \$5, and each eraser costs \$2. If you want to spend exactly \$20, write an equation in standard form modeling this situation.

a. Write an equation in standard form to represent this equation.

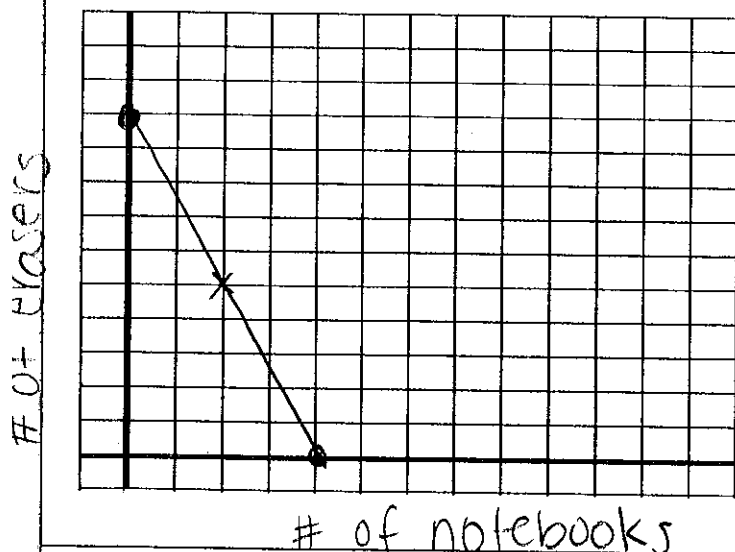
Equation: $5x + 2y = 20$

b. Find the x and y-intercepts.

x-intercept: 4

y-intercept: 10

c. Graph the equation using the x and y-intercepts.



d. Use your graph to determine one possible combination of how many of each notebook and erasers you can buy.

2 notebooks and 5 erasers